Application No. 10/692,240 Amendment dated June 25, 2007 Reply to Office Action of March 23, 2007

AMENDMENTS TO THE CLAIMS

Docket No.: 21064/0206620-US0

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A system for radially positioning a workpiece for electrochemical

machining, the system comprising: a base having a cavity to hold the workpiece, an electrode

assembly, the cavity having an electrode contact therein; a pressurized air chamber configured to

contain pressurized air; and an expandable diaphragm configured to position the workpiece radially

relative to an-the electrode assembly in response to the pressurized air being released into the

pressurized air chamber, a clamping ring, an anode contact, and an electrolyte passage, wherein the

base is the support for the system, wherein the workpiece is positioned by the system to permit

electrochemical machining of the electrode assembly the base has a locating area for placing the

workpiece, the anode contact forms a portion of the locating area such that the workpiece sits upon

the anode contact; and the clamping ring surrounds the electrode assembly.

2. (Original) The system of claim 1, further comprising a workpiece surface configured to

receive the workpiece when the workpiece is loaded into the system such that the workpiece sits

upon the workpiece surface.

3. (Original) The system of claim 2, further comprising a clamping ring configured to clamp

the workpiece against the workpiece surface.

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4. (Original) The system of claim 3, wherein the workpiece surface includes an anode

contact to which the workpiece is electrically coupled when clamped against the workpiece surface.

5. (Original) The system of claim 1, further comprising a pressurized air port coupled to the

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pressurized air chamber, the pressurized air being released into the pressurized air chamber through

the pressurized air port.

6. (Original) The system of claim 1, wherein the expandable diaphragm includes a thin wall

configured to deflect in response to the pressurized air being released into the pressurized air

chamber, the deflection causing the workpiece to position radially relative to the electrode

assembly.

7. (Original) The system of claim 6, wherein the deflection is approximately 75 microns.

8. (Original) The system of claim 6, wherein the thin wall has a thickness of approximately

150 microns

9. (Original) The system of claim 8, wherein the thickness of the thin wall does not vary by

more than approximately 5-10 microns in any one place.

10. (Original) The system of claim 1, wherein the expandable diaphragm radially positions

the workpiece with an accuracy of approximately 2 microns.

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11. (Withdrawn) A method for radially positioning a workpiece for electrochemical

machining, the method comprising: deflecting a thin wall of an expandable diaphragm, the

deflection causing the workpiece to position radially relative to an electrode assembly.

12. (Withdrawn) The method of claim 11, further comprising the step of releasing

pressurized air into a pressurized air chamber, the pressurized air causing the thin wall to deflect.

13. (Withdrawn) The method of claim 11, further comprising the step of placing the

workpiece within a locating area such that the workpiece sits upon a workpiece surface.

14. (Withdrawn) The method of claim 13, further comprising the step of clamping the

workpiece against the workpiece surface.

15. (Withdrawn) The method of claim 14, wherein the workpiece surface includes an anode

contact to which the workpiece is electrically coupled when clamped against the workpiece surface.

16. (Currently amended) A system for radially positioning a workpiece for electrochemical

machining, the system comprising: a base having a cavity to hold the workpiece, the cavity having

an electrode contact therein, a pressurized air chamber for deflecting a thin wall of an expandable

diaphragm, the deflection causing the workpiece to position radially relative to an electrode

assembly, wherein the workpiece is positioned by the system to permit electrochemical machining

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of the electrode assembly, a clamping ring, an anode contact, and an electrolyte passage, wherein

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the base is the support for the system, the base has a locating area for placing the workpiece, the

anode contact forms a portion of the locating area such that the workpiece sits upon the anode

contact; and the clamping ring surrounds the electrode assembly.

17. (Previously presented) The system of claim 16, further comprising an air port for

releasing a pressurized air into a pressurized air chamber.

18. (Canceled)

19. (Previously presented) The system of claim 17, further comprising a clamping ring for

clamping the workpiece against the workpiece surface.

20. (Original) The system of claim 19, wherein the workpiece surface includes an anode

contact to which the workpiece is electrically coupled when clamped against the workpiece surface.

21. (Previously presented) The system of claim 1, further comprising an electrode passage

for passing a conductive electrolyte to or from the workpiece for electrochemical machining.

22. (Previously presented) The system of claim 1, wherein the expandable diaphragm when

pressurized forms a hydraulic seal between the expandable diaphragm and the workpiece about an

entire outer circumference of the workpiece.

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23. (Currently amended) The system of claim 1, further comprising a clamping ring that is

adapted to be lowered on top of the workpiece wherein the electrolyte passage is in the base.

24. (New) The system of claim 1, wherein the expandable diaphragm comprises a flange

portion, a wall and a foot; the expandable diaphragm being attached to the base such that a seal

forms between the wall and the locating area.